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PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)	Application Number	09/720,953	
	Filing Date	February 13, 2001	
	First Named Inventor	Kiyotaka Tsukada	
	Group Art Unit	2827	
	Examiner Name	J. Norris	
Total Number of Pages in This Submission		Attorney Docket Number	232.001

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> After Allowance Communication to Group
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Formal Drawings	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input checked="" type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input checked="" type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	Return Postcard
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s)	
<input type="checkbox"/> Response to Notification of Missing Requirements Under 35 USC 371	Remarks	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	James F. Boyle, Reg. No. 33,653 Boyle, Fredrickson, Newholm, Stein & Gratz, S.C.
Signature	<i>J. F. Boyle</i>
Date	Nov. 1, 2002

CERTIFICATE OF MAILING			
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: <u>Nov. 1, 2002</u>			
Type or printed name	Robyn O'Neill		
Signature	<i>Robyn O'Neill</i>	Date	11/1/02

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PTO/SB/17 (11-01)  
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**FEE TRANSMITTAL**  
**for FY 2002**  
*Patent fees are subject to annual revision.*

☐ Applicant Claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** **(\$)**110.00

**Complete if Known**

Application Number	09/720,953
Filing Date	February 13, 2001
First Named Inventor	Kiyotaka Tsukada
Examiner Name	J. Norris
Group Art Unit	2827
Attorney Docket No.	232.001

**METHOD OF PAYMENT (check all that apply)**

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account

Deposit Account Number: 50-1170

Deposit Account Name: Boyle, Fredrickson, Newholm, Stein & Gratz S.C.

**The Commissioner is authorized to: (check all that apply)**

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

**FEE CALCULATION**

**1. BASIC FILING FEE**

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code	Fee Code		
101 740	201 370	Utility filing fee	
106 330	206 165	Design filing fee	
107 510	207 255	Plant filing fee	
108 740	208 370	Reissue filing fee	
114 160	214 80	Provisional filing fee	
<b>SUBTOTAL (1)</b>			<b>(\$)</b> 0

**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims: -20\*\* = ☐ X ☐ Fee from below = ☐ Fee Paid

Independent Claims: -3\*\* = ☐ X ☐ Fee from below = ☐ Fee Paid

Multiple Dependent: ☐ Fee from below = ☐ Fee Paid

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code	Fee Code		
103 18	203 9	Claims in excess of 20	
102 84	202 42	Independent claims in excess of 3	
104 280	204 140	Multiple dependent claim, if not paid	
109 84	209 42	**Reissue independent claims over original patent	
110 18	210 9	**Reissue claims in excess of 20 and over original patent	
<b>SUBTOTAL (2)</b>			<b>(\$)</b> 0

\*\* or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)**

**3. ADDITIONAL FEES**

Large Entity	Small Entity	Fee Description	Fee Paid
Fee	Fee		
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for <i>ex parte</i> reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	110
116 400	216 200	Extension for reply within second month	
117 920	217 460	Extension for reply within third month	
118 1,440	218 720	Extension for reply within fourth month	
128 1,960	228 980	Extension for reply within fifth month	
119 320	219 160	Notice of Appeal	
120 320	220 160	Filing a brief in support of an appeal	
121 280	221 140	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,280	241 640	Petition to revive - unintentional	
142 1,280	242 640	Utility issue fee (or reissue)	
143 460	243 230	Design issue fee	
144 620	244 310	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Processing fee under 37 CFR 1.17(q)	
126 180	126 180	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 740	246 370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149 740	249 370	For each additional invention to be examined (37 CFR § 1.129(b))	
179 740	279 370	Request for Continued Examination (RCE)	
169 900	169 900	Request for expedited examination of a design application	
Other fee (specify) _____			
<b>SUBTOTAL (3)</b>			<b>(\$)</b> 110.00

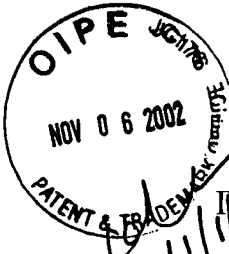
\*Reduced by Basic Filing Fee Paid

**SUBMITTED BY**

Name (Print/Type)	James F. Boyle	Registration No. (Attorney/Agent)	33,653	Telephone	414-225-9755
Signature	<i>J. F. Boyle</i>			Date	11-1-02

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PATENT

#11/C  
Amended  
J. McMillon  
11/12/02  
RECEIVED  
NOV - 8 2002  
TECHNOLOGY CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Of:

KIYOTAKA TSUKADA ET AL

Serial No.: 09/720,953

Filed: February 13, 2001

Group Art Unit: 2827

Examiner: J. Norris

PRINTED CIRCUIT BOARD

AND METHOD OF

MANUFACTURING THE SAME)

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: ASSISTANT COMMISSIONER FOR PATENTS, Washington, D.C. 20231, this 1<sup>st</sup> day of November, 2002.

Robyn O'Neill  
Robyn O'Neill

11/1/02  
Date

AMENDMENT

11/13/2002 JMC/MILLA 00000005 501170 09720953

01 FC:1201 11/13/02  
COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

Sir:

In response to the Office Action mailed July 5, 2002, a one-month extension of time being hereby requested with fee attached, please amend the above-identified application as follows:

In the Claims

Please cancel claims 1, 2, 4 and 10, and amend claims 3, 5, 9 and 11 as follows.

3. (Twice Amended) A method for manufacturing a printed circuit board comprising the steps of:

coating a lower surface and an upper surface of an insulative substrate respectively with a lower surface metal foil and an upper surface metal foil, the thickness of which is less